PATENT

AMENDMENTS TO THE CLAIMS

Following is a complete set of claims as amended with this Response. This complete set of claims excludes cancelled claim 1 and includes amended claims 2, 3, 5, 10, 15, 16 and new claims 17-22.

1. (Cancelled)

2. (Currently Amended) The method of claim [[1]] 3 wherein the implantable cardiac stimulation device also includes a telemetry device for inputting signals for use in controlling operation of the controller and wherein the step of detecting whether the patient is prone to vagally-mediated arrhythmias is performed by inputting a control signal using the telemetry device indicative of whether the patient is prone to vagally-mediated arrhythmias.

3. (Currently Amended) ~~The method of claim 1~~ In an implantable cardiac stimulation device for implant within a patient having a controller for controlling functions of the cardiac stimulation device, a method comprising the steps of:

detecting whether a patient in which the cardiac stimulation device is implanted is prone to vagally-mediated arrhythmias;

controlling the functions of the cardiac stimulation device using the controller based on whether the patient is prone to vagally-mediated arrhythmias; and

~~further including the step of~~ determining whether the patient is at rest and wherein the step of controlling the functions of the cardiac stimulation device using the controller is further based on whether the patient is at rest.

4. (Original) The method of claim 3 wherein the implantable cardiac stimulation device includes an activity sensor providing a signal indicative of a level of activity of the patient and wherein the step of determining whether the patient is at rest is performed by comparing the activity level to a predetermined rest-mode triggering level.

5. (Currently Amended) The method of claim 3 wherein if the patient is prone to vagally-mediated arrhythmias, ~~the~~ a predetermined rest-mode triggering level is set higher than if the patient is not prone to vagally-mediated arrhythmias.

6. (Original) The method of claim 3 wherein if the patient is prone to vagally-mediated arrhythmias, selected functions of the implantable cardiac stimulation device are controlled using a first set of parameters while at the patient is at rest and using a second set of parameters while not at rest.

7. (Original) The method of claim 6 wherein the selected functions include overdrive pacing and wherein the first set of parameters used for a patient prone to vagally-mediated arrhythmias while the patient is at rest provides generally more aggressive overdrive pacing than the second set of parameters used while the patient is not at rest.

8. (Original) The method of claim 7 wherein the first and second sets of parameters specify overdrive pacing response functions for use in overdrive pacing the heart and wherein the overdrive pacing function of the first set of parameters provides a generally higher overdrive pacing rate than the overdrive pacing function of the second set of parameters.

9. (Original) The method of claim 7 wherein the first and second sets of parameters specify overdrive pacing recovery rates for use in overdrive pacing the heart and wherein the overdrive pacing function of the first set of parameters provides a generally slower overdrive pacing recovery rate than the overdrive pacing recovery rate of the second set of parameters.

10. (Currently Amended) The method of claim 7 wherein the first and second sets of parameters specify a number of overdrive beats to be paced at an overdrive rate before any recovery begins and wherein the number of overdrive beats of the first set of parameters is greater than the number of overdrive beats of the second set ~~of the second set~~ of parameters.

11. (Original) The method of claim 6 wherein the selected functions include periodic diagnostic information gathering and wherein the first set of parameters used for a patient prone to vagally-mediated arrhythmias while the patient is at rest provides for more frequent diagnostic information gathering than the second set of parameters used while the patient is not at rest.

12. (Original) The method of claim 6 wherein the selected functions include diagnostic information gathering and wherein the first set of parameters used for a patient prone to vagally-mediated arrhythmias while the patient is at rest provides for gathering of additional diagnostic information than provided by the second set of parameters used while the patient is not at rest.

13. (Original) The method of claim 6 wherein the selected functions include base rate pacing and wherein the first set of parameters used for a patient prone to vagally-mediated arrhythmias while the patient is at rest provides a base pacing rate at least as high as a base rate of the second set of parameters used while the patient is not at rest.

14. (Original) The method of claim 6 wherein if the patient is not prone to vagally-mediated arrhythmias, selected functions of the implantable cardiac stimulation device are controlled using the second set of parameters regardless of whether the patient is at rest.

15. (Currently Amended) An implantable cardiac stimulation device for implant within a patient comprising:

control means for controlling selected functions of the device;

storage means for storing sets of control parameters for use by the control means, the storage means storing a first set of control parameters for use if the patient is prone to vagally-mediate arrhythmias and a second set of control parameters for use if the patient is not prone to vagally-mediate arrhythmias; and

means for detecting whether the patient is prone to vagally-mediated arrhythmias; and

wherein the controller means inputs the first set of control parameters from the storage means if the patient is prone to vagally-mediated arrhythmias for use in controlling the selected functions of the device and inputs the second set of control parameters from the storage means if the patient is not prone to vagally-mediated arrhythmias for use in controlling the selected functions of the device; and

wherein the selected functions include overdrive pacing and wherein the first set of control parameters used for a patient prone to vagally-mediated arrhythmias while the patient is at rest provides a more aggressive overdrive pacing than the second set of control parameters used while the patient is not at rest.

16. (Currently Amended) An implantable cardiac stimulation device for implant within a patient comprising:

a pulse generator that generates pacing pulses for applying to the heart of a patient;

a detector that detects whether the patient is prone to vagally-mediated arrhythmias; and

a controller that controls the pulse generator of the device based on whether the patient is prone to vagally-mediated arrhythmias;

wherein the controller overdrive paces the heart more aggressively when the patient is prone to vagally-mediated arrhythmias than when the patient is not prone to vagally-mediated arrhythmias.

17. (New) The device of claim 15 wherein the first and second sets of parameters specify overdrive response functions for use in overdrive pacing the heart and wherein the overdrive pacing function of the first set of parameters provides a higher overdrive pacing rate than the overdrive pacing function of the second set of parameters.

18. (New) The device of claim 15 wherein the first and second sets of parameters specify overdrive pacing recovery rates for use in overdrive pacing the heart and wherein the overdrive pacing function of the first set of parameters provides a slower overdrive pacing recovery rate than the overdrive pacing recovery rate of the second set of parameters.

19. (New) The device of claim 15 wherein the first and second sets of parameters specify a number of overdrive beats to be paced at an overdrive rate before any recovery begins and wherein the number of overdrive beats of the first set of parameters is greater than the number of overdrive beats of the second set of parameters.

20. (New) The device of claim 16 wherein an overdrive pacing rate is higher when the patient is prone patient is prone to vagally-mediated arrhythmias than when the patient is not prone to vagally-mediated arrhythmias.

21. (New) The device of claim 16 wherein an overdrive pacing recovery rate is slower when the patient is prone to vagally-mediated arrhythmias than when the patient is not prone to vagally-mediated arrhythmias.

22. (New) The device of claim 16 wherein the controller specifies a number of overdrive beats to be paced at an overdrive rate before recovery begins and wherein the number of overdrive beats is greater when the patient is prone to vagally-mediated arrhythmias than when the patient is not prone to vagally-mediated arrhythmias.